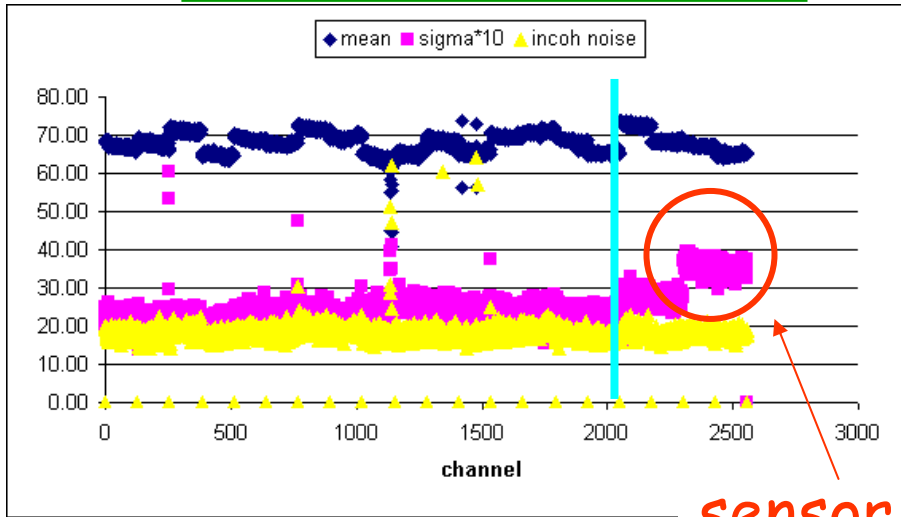


Plots shown in the last meeting

BW=15

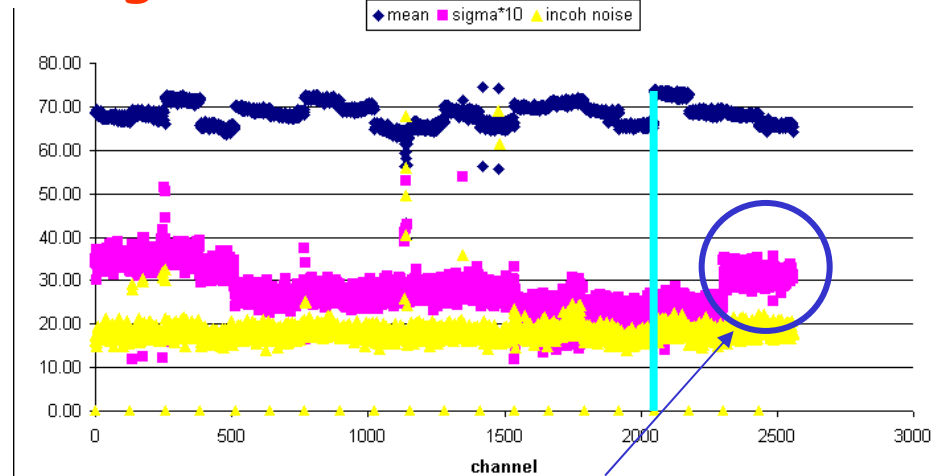
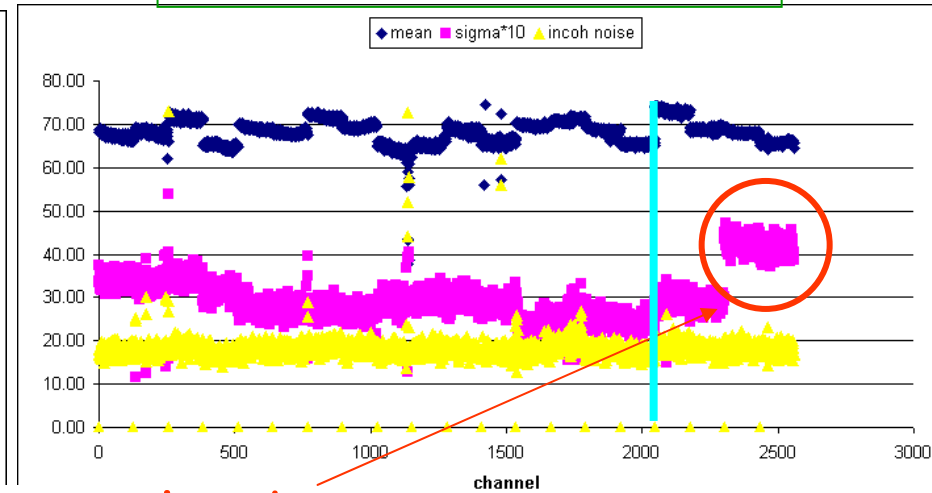
common GND at AC



sensor not glued

- Looks as if glue the sensor helps to reduce the noise for 10th module with the (semi-)isolated GND scheme, BUT...

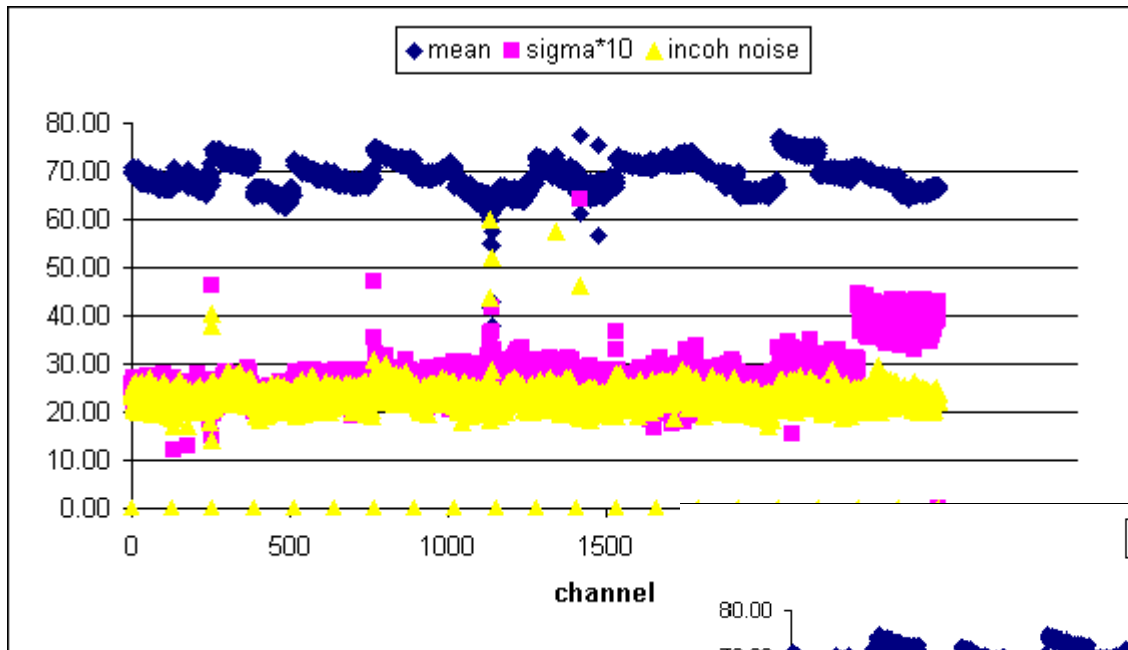
isolated GND at AC



sensor glued

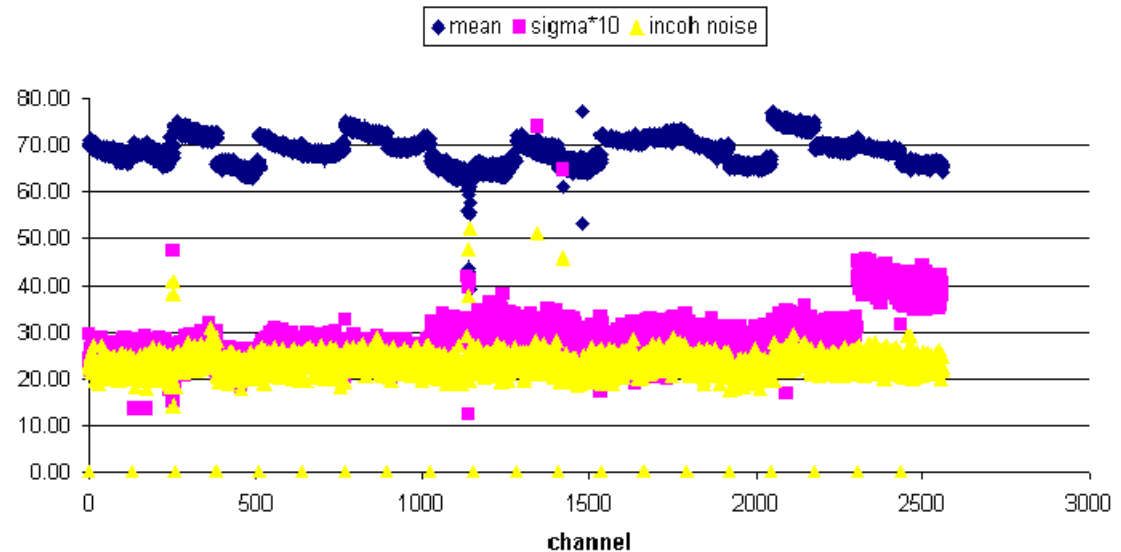
Comparison with common GND

BW=4

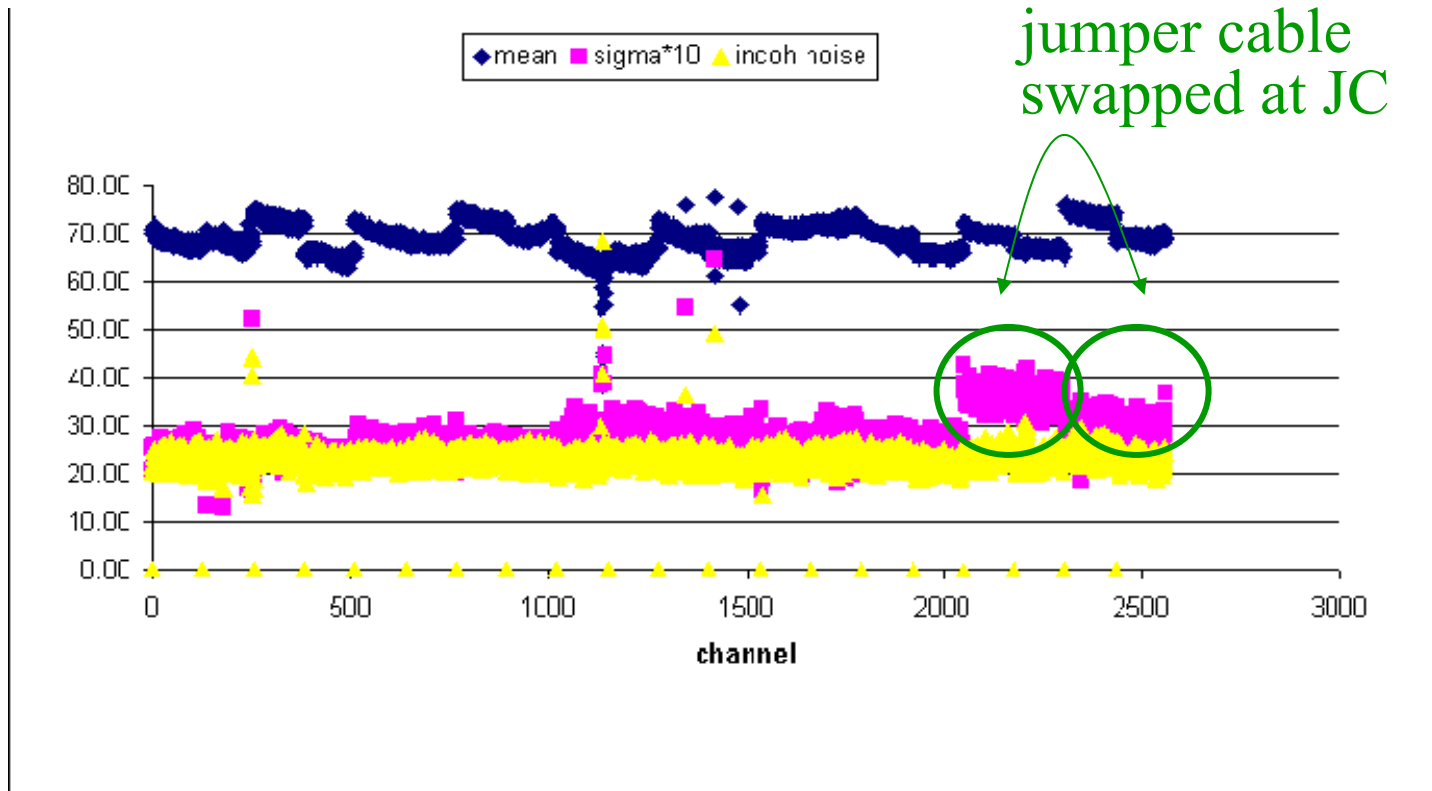


← before
after glueing
sensor

- No change with common GND at AC



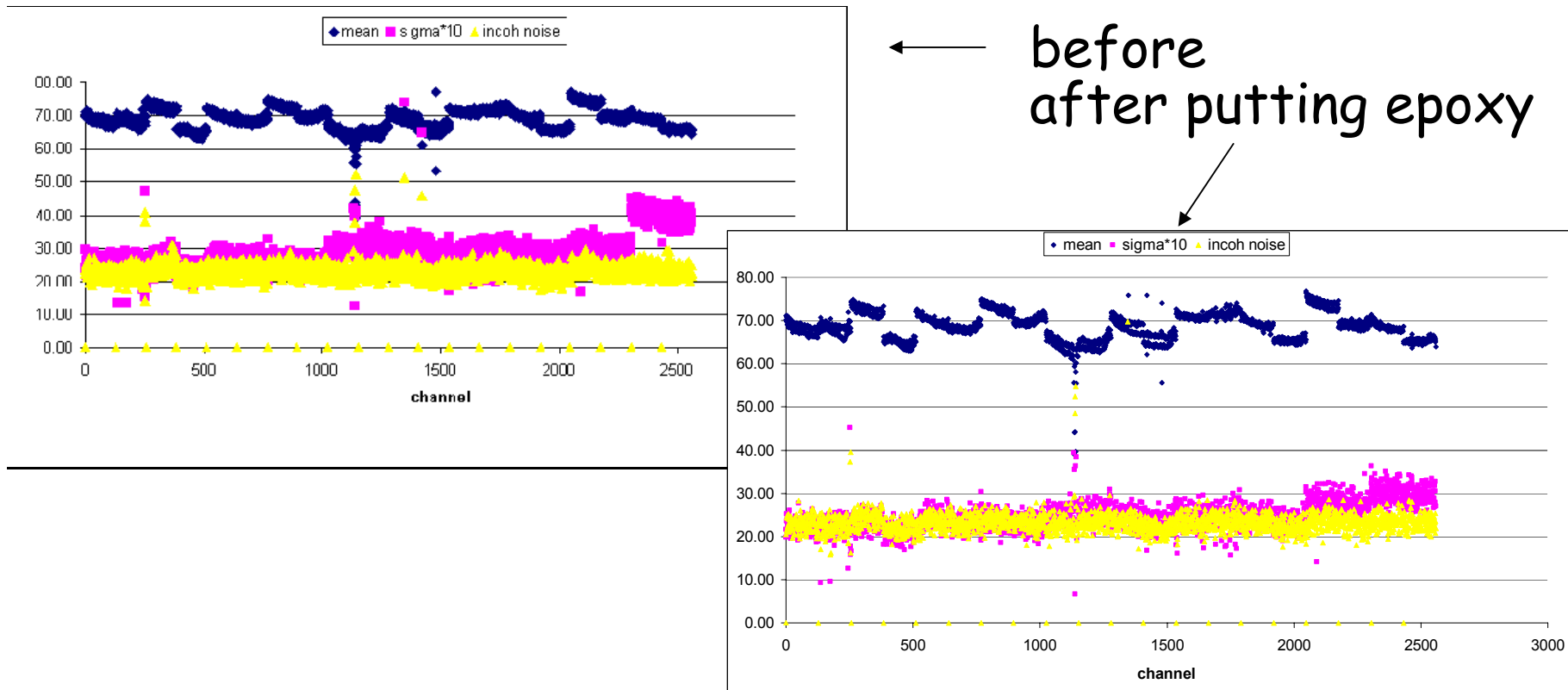
Bad module ?



- The module really has higher noise

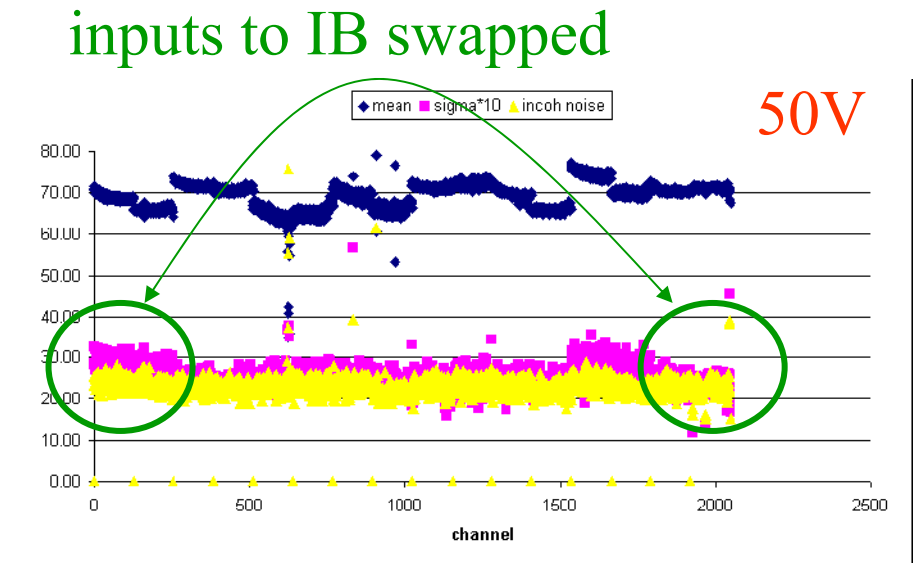
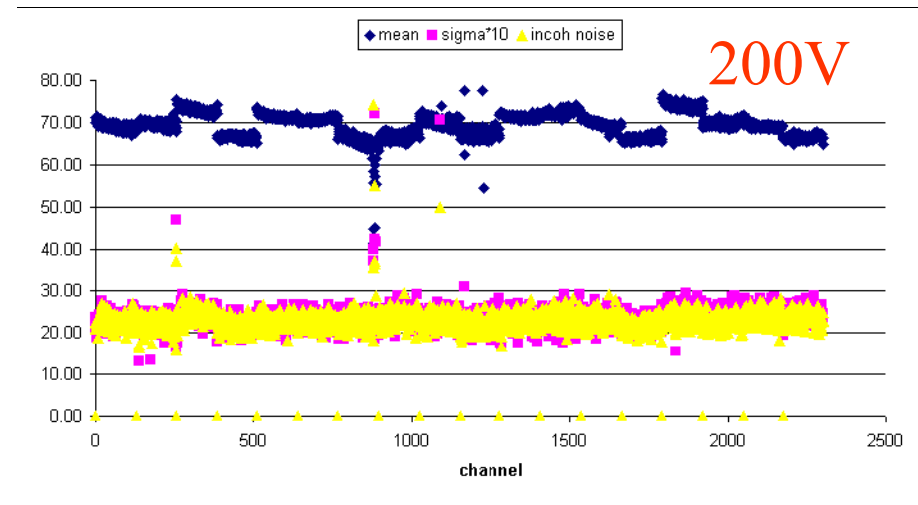
Fix

- The sensor ground is properly connected to the support structure, but HV capacitor for the filter → put conductive epoxy



Other effect

- The last two modules (using different IB) has slightly higher noise
 - Increasing bias voltage from 50 to 200 V reduces the noise (Andrei)
 - Swapping the inputs to IB indicates no problems in IB
- ➔ just under depletion(?)



Summary

- Coherent noise caused by poor connection of filtering capacitor on the sensor
→ we need to confirm the connection by capacitance (and DC resistance) measurement for all the modules
- The source of slightly higher noise for the last two modules is not so clear - just need to fully deplete???
- Need study for the isolated ground configuration